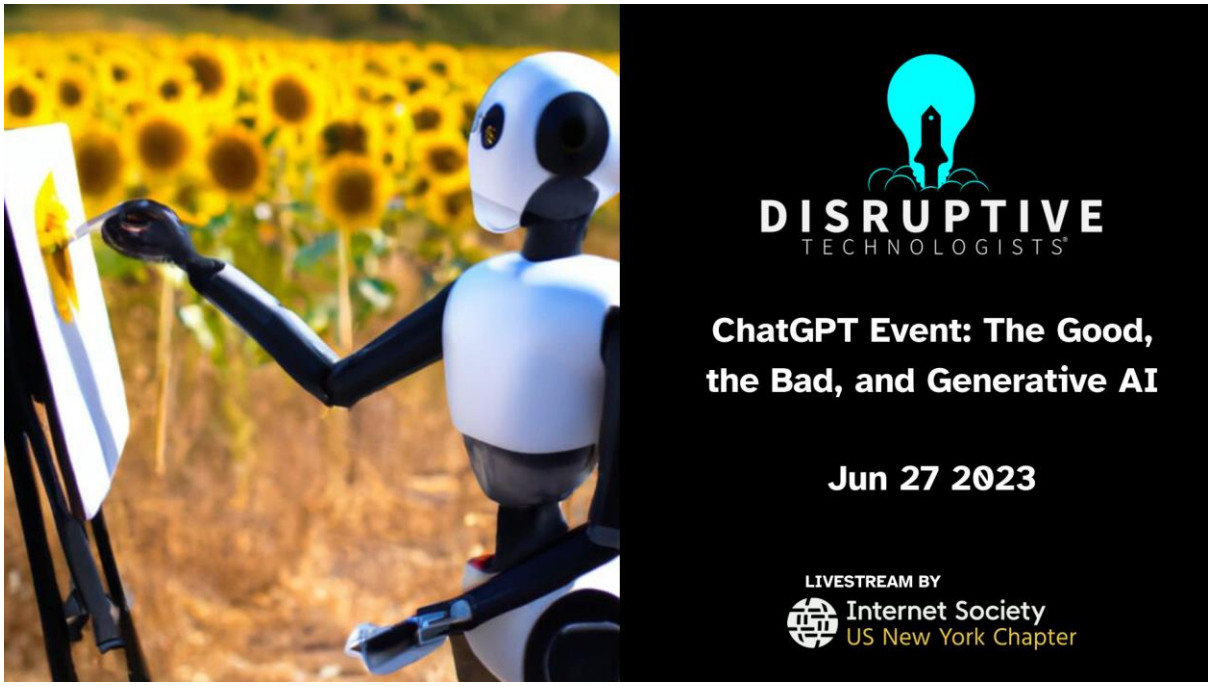

Disruptive Techs ChatGPT Event: The Good, the Bad, and Generative AI

June 27 2023 - Microsoft NYC

Sep DiMeglio, Microsoft: Welcome, everyone. This is a great turnout for in person. I'm glad to see it's filling up again, like we used to have prior 2020. Special thanks to our supporters, the Microsoft Reactor, the space we're in today, UC Berkeley Cal Alumni Association, Ca, Esther Dyson, who we have virtually today, Ramona Wright, Jeff Paul and Ziotag, Jabril Bensedrine and Triana Group at NYU Tandon School of Engineering, and the Internet Society. Thank you. Today, filling in for Frank Lavigne, who had a family emergency, we have Ivy Cohen, president and CEO of Ivy Cohen Corporate Communications.

Ivy Cohen: What I'd like to do to start off is ask each of our panelists to just spend a minute giving us an introduction to your background.

Why don't we start with Rushil Vora.

Rushil Vora, Microsoft: Absolutely. Hi everyone. Thanks, Ivy. So, my name's Rushil. I'm an AI product manager at Microsoft. I've been part of our business applications product suite for about three and a half years now, focused on all sorts of different AI applications in the customer service space.

Most recently I've been working on Copilot, and some of our generative AI applications, figuring out how we apply some of the OpenAI models into the world of customer service, making it easier for support agents to deliver even better service to folks, like really all of us. But, I'm also a consumer of some of these new and exciting technologies like ChatGPT.

I have, of course, used ChatGPT to create recipes, for example, alongside my fiancé, who cooks them a lot better than I do. I've also leveraged some of the other applications out there, and super excited to be a part of the panel today, hear questions from all of you who participate, and, of course, chat about all of the goodness, badness, and ugliness, potentially, with, the GBT.

Ivy Cohen: Awesome. And Nasrin Mostafazadeh, and please correct my pronunciation of your last name.

Nasrin Mostafazadeh, Verneek: Perfectly fine. Thank you so much. Thanks for having us, and hi, everyone. I'm Nasrin, and my background is AI, I'm an AI scientist by practice. I've been working on AI, and in particular, in language AI, and in particular, on common sense reasoning, which is the most basic cognitive ability that the three year old child has, for the past 18 years, and now I'm a founder of this deep tech AI startup right here in Flatiron called Verneek.

At Verneek, our mission is to really build the most helpful AI that can augment each and every one of us wherever we are throughout our lives. So, we are all about augmented intelligence as opposed to artificial intelligence. We are all about building these seamless ways that you can really interact with various environments, be it digital or physical, through your own voice or text so that you can make better and faster decisions.

And that's the name of our AI, Quin, Q-U-I-N, is the name of the platform that we have, that manifests itself in so many different contexts, by virtue of this really trustworthy AI that sits on top of, say, an app or a website, or even on top of a physical retail, and enables you as consumers throughout your journey to interact with Quin, which is all about helpful AI sitting on top of curated sources of information.

It doesn't hallucinate, it doesn't make things up, because inherently it's built to be enterprise grade, and our first application happens to be in the commerce world, so we are actively working with various retailers and e-commerce platforms to Quin enable their spaces.

And, if you guys, in any organization that you have, you're sitting on top of data that you need to enable your consumer facing applications to be Quin enabled, I would love to talk to you.

Ivy Cohen: We'll get into more details later for sure. Adam Bly, introduce yourself.

Adam Bly, System: Hi everyone, good to be here. I'm founder and CEO of a public benefit corporation based in New York called System. Our mission is to relate everything to help the world see and solve anything as a system, and the motivation behind that is, when we look at some of the biggest issues we face in the world today, from healthcare to climate change, these are highly complex systems, they're highly interdependent, highly interconnected, and yet the way that we understand and organize the world's information today is highly siloed and fragmented, impedes our ability to make the best possible decisions.

And so,we launched, a year ago, an open graph of the world systems, we use AI to extract evidence of how things relate in the world, and a month ago launched an AI powered search engine on top of that, that indexes all of scholarly research, so 100 million plus scientific studies, uses structured data together with large language models to generate reliable, explainable, trustworthy synthesis, and we're highly focused today on healthcare and life sciences as the first sector that we've brought this out into. I formerly founded a company called Seed Scientific, a data and AI company, and sold it to Spotify, and went to go head up data at Spotify there for a few years.

Ivy Cohen: Fantastic. Esther, please introduce yourself to our audience.

Esther Dyson, Wellville: Great. So, first of all, full disclosure, I'm an investor in both Verneek and System, and I like them both because they are taking ChatGPT and other large language models and applying them to real models of the world. The problem with ChatGPT is just like...

To me, George Santos is the epitome of ChatGPT, you know, it sounds good, but no connection to a kind of validated reality.

And, I first read about this stuff back in 1986, when a guy called Doug Lennett from Psych was making a model of the world, and he had a lot of women grad students working, typing stuff into computers. And now, finally, it's all coming to fruition, and I think the real value is going to come in the models of the world that are now much more easily accessible because of the large language models.

Ivy Cohen: Fantastic. We're so happy you can join us.

Esther Dyson, Wellville: So am I.

Ivy Cohen: Thank you, great. Okay, Sep.

Sep DiMeglio, Microsoft: I'm Sep. I'm an accessibility program manager for Microsoft's Cloud and Artificial Intelligence division, and I'm also the sponsor for Disruptive Tech's meetups. So, thanks all for coming today. It's really great to see some faces in person.

Hopefully we have some folks watching online, or checking in later, excited for the conversation today.

Ivy Cohen: Great, let's do it.

Okay, so, for starters, we now heard about the specializations and expertise of each of our panelists. I'm going to ask everyone to step out of their own expertise and really talk about what's happening from a broader industry and societal perspective.

So, the title of the session is The Good, The Bad, and The Ugly, right? So, the good?

I'm going to save the good for last, and let's start with the bad. Let's talk a little bit about how you see ChatGPT impacting society at work, at home, and in our lifestyle human interactions. What are you observing? What's already in place? We may not all know everything that's happening that has AI and ChatGPT saddled up to it, but we also want to know what the potential impacts are, as things are rolling out.

So, who would like to, and everyone doesn't have to answer each question, so whoever would like to...

Esther has raised 10 fingers. Go for It, Esther.

Esther Dyson, Wellville: We are at a really challenging time in the world at large right now, and I think, if you look at what's happening in Russia and Ukraine, it's so much easier to destroy than to build. That's true, both in the case of crazy countries and our society at large. I think the real danger here is that bad business models, and, if you like, evil actors, or various kinds of politicians, will take advantage of GPT to create a lot more damage than all the good things ChatGPT can do.

There's no real solution, there are always going to be evil people. The thing I would suggest is that we focus a lot more on training our children, than our AIs, and teach them to be self-aware, teach them to manipulate themselves, rather than being manipulated by evil business models.

The other is just to understand the provenance. It's not does this use AI or not? Does this use the telephone or not? But, what's the business model behind this thing I'm seeing? What's the business model? What's the provenance of this tool, that is giving the advice, and the ability to be skeptical, yet somehow trusting of human beings.

Ivy Cohen: Adam?

Adam Bly, System: Yeah, I would echo everything Esther said, and build on that, and say that, I think we have, over the past several years, witnessed an assault on truth and facts in this country and around the world, and so generative AI is coming at a time, it's landing at a time, against the backdrop where our very information culture, and sort of the epistemological principles of our society, how we make decisions, how we make policy, how we decide, um, who goes to prison for life, all of these sort of very fundamental decisions now, and our use of facts, our consideration of sources, the principles of journalism, all of the things we use in jurisprudence, in law, in medicine, in science, all of this now is at risk.

I would say, if I was to really look ahead at what the biggest, most substantial, existential risk that this technology presents, it's that the entire basis for truth, and how we make decisions in civilization, is at risk.

Ivy Cohen: Thanks for that short and cheery summary. Anyone else want to comment on any concerns we should have about how ChatGPT's impact the way we live and work?

Nasrin Mostafazadeh, Verneek: So, to make it more interesting, I would disagree. This is like the existential risks that are associated with the likes of ChatGPT.

First and foremost, it's like we're all...

It's like, isn't it exhausting how much we are all talking about AI? Like, every single person at any capacity, be the board level conversations, be your day to day, you're at the playground where your kids and moms are talking about it, and dads are coming and talking about it?

This is just getting out of hand, and the truth is that, I think the main reason we're all talking so much more about these things, rather than, of course, to my panelist's point, there are all these real threats, real challenges, ranging from disinformation and misinformation to the displacement on the job front and so many other things...

But, none of this has happened overnight, I think the reason we're all so fearful talking about the ugly side of what we are seeing, which is a literal definition of hyped up technology, which is due to a technology trigger, which was the launch of ChatGPT, the reason we're even having these conversations is that there was lack of awareness, right? That not everyone was educated about where we come from, and where we are going about this, and it feels like we all woke up one day, and everyone is talking about the dangers of AI.

And, of course, it feels more existential. Of course, it feels more threatening. Of course, it feels like, Oh my god, we are not ready. Everything is going to change overnight.

Nothing has happened overnight, this has been many, many, many, many decades of gradual progress. Yes, we've had exponential growth, exponential progress that we've made on the AI research front, which I've personally been part of creating, but the truth is, that talking about the ugly, the real ugly we should all be talking about is, yes, misinformation and disinformation, yes, displacement of jobs, yes, the fact that we are social animals, and, at the end of the day, yes, to Esther's point, if our kids grow up not knowing how to talk to human beings, and learn to just talk to chatbots, because they ended up using it as their therapist of all, those are real problems.

But, however you slice and dice it, I think the... just whoever talks about the fact that AI is going to take over humanity, in this sense that it's going to suddenly get sentient and just have super intelligence, I think those are all blown extremely out of proportion.

So, let's talk less about those and more about the real ugliness, and I'll just add this point that my company, we literally made a controllable AI, trustworthy AI, that's literally what we've done.

And I do believe that these AI models, such as the ChatGPTs of the world, have this inherent problem, of course, that they're not controlled, which is its own, basically, conversation.

Ivy Cohen: You want to come?

Rushil Vora, Microsoft: Yeah, I'll keep it quick. So, just to add on to the last comment, I think there are the political questions and there's the questions around how does AI actually provide information to the world and all of those.

But, I think the other piece to also think about, is just the pace at which it has become more broadly recognized and aware. I think folks have been talking about AI, especially in kind of mainstream use cases, for some time now, but that technology trigger, ChatGPT, actually really broadened and widened the audience for it, and now who's listening and receiving information around what AI is and how it can be used, and so I think really the bigger challenge is how quickly can we educate more broadly on how to use it, how quickly can we spread information on what it is, what it's not, and spread the right information surrounding that, and that's really more of where that challenge, I think, is with AI at this point in time, as it becomes more mainstream, used with more mainstream applications, is the different ways in which it can be used and applied in those different scenarios.

Ivy Cohen: And, all of you are involved in some way with something that's very proactive and positive and constructive, and then we talk about the doom and gloom.

But, really, we know that, across the news media and across the playgrounds, all these personal conversations, we're all talking about this, and we hear a lot of panic. So, what

I'd love to hear, from as many of you as would like to chime in on this, is, what should we be panicking about?

And, more importantly, rather than just focus on the panic, what is the best defense to be sure that AI and ChatGPT are used in a constructive way to minimize these risks.

Adam Bly, System: I would say first off...

So, my bias is I'm Canadian and I believe in good government, the role of government, government can be good.

Government has failed us quite miserably, because absolutely AI has been, this is not new, the technology is not fundamental, the science at least is not fundamentally new. We've been seeing an evolution of this technology over a couple of decades.

The bodies that are set out in government, in the U. S. and Europe at least, to anticipate and regulate these kinds of emerging technologies, have failed us. And, the reason for that, in the United States, this is something I've been working on for the last few years, is that there once was a body in Congress called the Office of Technology Assessment, and it was born to precisely provide Congress with the foresight and the subject matter expertise in science and technology so that it could appropriately, rationally, regulate the issues of our time. It was defunded in 1995. So, for the last 25, 30 years, Congress of the United States has existed without a dedicated science and technology advisory function.

And so, when you try to imagine why are we here today, and it's ultimately, I think, because we've deferred a lot of the subject matter expertise in the regulatory process to industry, and it's tech CEOs coming before Congress and lobbying for what it is that should be the regulatory frameworks of our time, instead of having independent scientific and technological expertise in Congress setting legislation.

And so, there's efforts over the last few years to revive this body, and I would say that one of the most important things we can do today, because we've moved beyond the era of self-regulation, which is what worked in recombinant DNA -- when you think about sort of the last big thing like this was, 1970s, the beginning of the recombinant DNA and genetic engineering revolution, and there, scientists as well anticipated that things could go really awry. And so, they self-governed. They said, you know what, we're going to assemble in Asilomar, and come together and set some principles -- and that's been happening in AI, but it's certainly not robust enough, and now we need really, I think, strong rational government.

Ivy Cohen: Anyone else want to weigh in on this?

Nasrin Mostafazadeh, Verneek: Such an excellent point that you made regarding the role of the government. I think the truth is, again, talking about why this technology trigger has caused this much fear, as opposed to excitement, that it does deserve and for the goods that it can do, it has everything to do with the fact that the lack of awareness and lack of education is so fundamental.

The fact that we've had those hearings, the verdict, Congress people were literally offering a company like OpenAI, do you want to be on the committee that regulates you? That's just beyond me, and then that tells you how deep these issues are, and I do wish that maybe a lot of governments operated more so like the Canadian governments of the world, but that's not the truth,

There are so many sides of the argument, of course, as someone that has spent her lifetime working on advancing science, the last thing you want to do is to have so many guardrails that makes it impossible to innovate and all of that. Of course, with regulation, what comes is, in this country at least, that people that pay get to play, and get to be the ones that are having those check boxes that gets checked, and smaller companies, startups, up and coming innovators, don't get to be part of the equation whatsoever.

So, really, the truth is, it is a double edged sword, if you think about it critically, but I do believe that it's been long overdue, and the truth is, in AI, there have been so many...

Of course, the particular organization that got dismantled, to your point way back, aside, there have been so many partnerships, like things like Partnership on AI, and other endeavors, that have been about tech companies coming together to think about how we go about building these technologies at a scale, how do we roll it out, what kind of ethical concerns should we try to mitigate and all of that.

At the end of the day, one other point I want to make, how do we go about regulating, aside, we should know AI does not equal ChatGPT, AI does not equal generative AI whatsoever. The last thing I want to see happen, which unfortunately probably will, because again there's this Gartner hype cycle, that talks about when the technology trigger comes, there's this time that there's an over excitement, and then, naturally, the over excitement is over promise and under delivery, and then we go back all the way down to the disillusionment period, and we are probably inevitably going to hit that, and the truth is that AI does not equal ChatGPT, so with all the issues and problems that we have to overcome, with the likes of these large language models that are, uncontrolled, it does not mean that the field of AI, as a whole, does not and cannot make, positive impact.

Let's not put them all in the same bucket, and the regulatory frameworks also shouldn't apply to the buckets in the same breath. That kind of play should be regulated, and the control plays that are by default controlled should not be.

Ivy Cohen: A lot of the AI applications are around data analytics.

Yeah. They benefit consumers for getting better information, the right information, they benefit businesses because they're able to feed more useful information and offers to consumers, there's so many things that AI does. ChatGPT is one component, that's very well stated. I want to ask everyone, and we may come back to some of these themes as we continue the conversation, but I'd like to get some thoughts about the workplace. So, Disruptive Technologists, within its mission is to advance the knowledge and access to expertise around disruptive technology, and so as we see AI, ChatGPT, and generative technology getting further and further advanced, what are some of the skills we need to be preparing our talent for?

What do people entering the workplace today need to be prepared for, and are there particular jobs that are being created as a result of this that we need to start hiring for, and being educated and trained for?

Nasrin Mostafazadeh, Verneek: Esther is..

Ivy Cohen: Yeah. Oh, Esther?

Esther Dyson, Wellville: Very briefly, writing good prompts is kind of the main one, and there will be a lot of people whose tasks that they are doing now will probably no longer be necessary, but writing good prompts and being creative, and then having all the work done to be that creative, is going to be really important, figuring out what needs to be done rather than actually doing it. The ability to make lists of potential clients, to write sales pitches, that's going to be so automatable.

And, again, my hope is that we use some of the people who no longer do this kind of work to become teachers and train other people to write good prompts.

Nasrin Mostafazadeh, Verneek: Absolutely. in my view, the interesting kind of surprise, that this whole AI wave has showcased, is that our projections that mainly the blue collar workers are going to be the ones that get disrupted, like your truck drivers are going to be the ones that get displaced, has not been the reality, and more so it's been the reality that lawyers are going to get replaced probably at a muchhigher speed than the truck drivers, and I think that tells you something.

Which goes back to, again, my background in AI is common sense reasoning. I got into the field by coming across this phenomenon that's called Moravec's paradox, which tells you what comes so easy to us as human beings is actually the hardest to replicate for machines and vice versa.

It feels like we can all drive a truck, at the end of the day, but then the whole skill set that it basically requires for navigating that actual real world context, it turns out to be

much, much harder at scale than basically passing the bar exam, than being able to apply yourself in the context as a lawyer.

I see someone's face there, are you a lawyer? So, you are a lawyer, yes.

[laughter]

So, that's the truth, I think that we actually are going to need more and more human beings that work on tasks that require empathy, that require actually those basic functions that are so human, and so, really intrinsic to who we are as a species. Our application happens to be in the commerce world, we augment basically physical spaces with this AI that you can ask questions to, and the thing is that people that are restocking the shelves are not going to be replaced any time soon in these very custom particular layout stores.

Ivy Cohen: That's for the robotic conversation.

Nasrin Mostafazadeh, Verneek: Exactly. But point being, that's AI, the umbrella being AI. So, the bottom line is that I do think that we all need to work towards the more humane aspects of our lives.

Ivy Cohen: Social?

Nasrin Mostafazadeh, Verneek: Social.

Ivy Cohen: Yes? Rishal, did you have something you wanted?

Adam Bly, System: Go ahead.

Ivy Cohen: Rishal, please.

Rushil Vora, Microsoft: I think that the idea of prompt engineering, or even the recent term we started hearing coming up, is sort of its own discipline, I think it's a really interesting one, Just because, as access starts to increase to more of these generative AI models, prompting, and being able to essentially speak to them in a way to produce some helpful output, is going to become a skill set. I would almost view that as not its own independent skill set where we may have experts in prompting, for example, but rather an augmentation of something that you might already be doing.

So, to take that back to an actual example, like one of the scenarios that we work with...

In the space that I work in, we're working on building software for support agents, and one of the common tasks that a support agent would typically use is, at the end of

support interaction, they've spoken with their customer, they've spent a bunch of time actually interacting with them, then they would wrap up, and it might take on average six minutes to actually document what happened in that support interaction, and, store that somewhere for that next person to review, or for whatever other process that might be tied to that.

One of the applications of AI, and this could be generative AI, is actually taking that interaction, taking other data associated with that, summarizing that, compiling that into something that can essentially be done automatically, and that six minutes that a support agent gets back is essentially time that they can spend focusing on that end customer.

And so, back to some of those other pieces, the function or that role might start to evolve over time, where actually spending time with the end customer becomes more important than some of the other administrative tasks that surround that function itself.

That's where I think it'll be interesting to see how that evolves, because if we all think about our good and bad support interactions we've had, when we've picked up the phone and dialed for support, in many cases, a really great support agent will stay there on the line with you, or they'll walk you through the steps, they'll take the right amount of time to actually help resolve your issue, or find the root cause, and the more that they can continue allocating that time towards you, the better the reflection of that brand is that you're actually reaching out to.

And so I think we'll start to see that function shifting, where it's less around, the pieces that AI can automate. it'll help take that out of the picture. And allowing, to really help focus on the human aspect of it. And I think those pieces will come first. before AI actually even starts to take the human aspect out of the picture, because that's something that's a lot more challenging, it's a lot more nuanced, and it's very difficult to do that consistently well.

Ivy Cohen: As a follow up to that, I wonder what happens at the business strategy level. Do we say, oh, we can serve more customers more efficiently, quicker, and have fewer customer service staff?

Or, do we say, AI and ChatGPT gives us the opportunity to rethink our customer service strategy, and make it deeper because of the efficiencies. There's a cynical bottom line part of me that says, I don't know. How many organizations are going to get us there? I think you're right for those brands who pride themselves in customer service and want to be known that way, and those brands who want loyal customers. The way you describe the ideal situation is very appealing.

Rushil Vora, Microsoft: Yeah, and just to follow up on that piece, at least in that space, historically, a lot of times, like a support center has been thought about as a cost center,

or something where my goal is to actually reduce how much I'm spending on that, that's the piece that could be interesting to see how that evolves over time, which is maybe I don't think about my support center as a cost center moving forward, but actually a key differentiator for my brand and for my business, and, if that's the case, we continue to invest in that, we continue to nurture that aspect of our business to really ensure that it becomes a core part of our brand and our offering, whether that's a product, whether that's a service, that's something else.

Adam Bly, System: I would also say, we run the risk in these conversations of the future of jobs, of conflating automating tasks with automating functions and eliminating functions.

When you think about law, passing the bar exam doesn't make you a good lawyer. When I think about the moments where my lawyers have earned truly, I've built the relationship with them and we'll go to them time and time again, now, as a trusted counselor, it's not because they like gave me an efficient non-disclosure agreement faster, or a purchase agreement. It's not the automated tasks, or being able to quickly pull up case law on something. The things that we will automate will create space for leveling up these functions.

When you think about it in healthcare, where we're focused right now, if a doctor can, if a clinician or a biomedical researcher can save hours of time reading through hundreds of peer reviewed studies to get a synthesis of all that research, that frees them up to spend more time at the point of care.

We're not talking about transitioning medicine away from a doctor patient interaction, or a lawyer client interaction, we're talking about transforming fields to be able to move up the cognitive ladder and ultimately find new spaces for value creation.

To me, that's how I would look at it, is how do these fields change, not, are they going to be overrun by AI in any foreseeable future.

Ivy Cohen: Can any of you comment on the specific training or education needed for someone today to be involved on the ChatGPT side of things?

Adam Bly, System: On the ChatGPT? You mean on the engineering things like ChatGPT?

Ivy Cohen: I would say the continuum of ChatGPT, so the engineering and the actual application.

Adam Bly, System: Obviously there's a greater emphasis now on building more skill sets in machine learning and AI and data science and data engineering, and all the upstream tasks required to build these kinds of systems. These systems are

fundamentally dependent on the data that goes in, and so we ought not forget that there's an important element of just the data stack itself, that's going to be ever more important as we become more dependent on the AI stack. That whole class of engineering, that whole class of data science, that whole class of statistics becomes important.

But, Esther raised this earlier, or I think was hinting at it, is it's even more important that we're educating for information literacy and critical thinking. If anything, the skills that we need to be more aware of are the ability to observe deeply, and use all of our senses to understand a patient's case in a more holistic fashion, to be deeper systems thinkers, to be more compassionate and empathetic, to spend space and time on those skills.

In the same way that we didn't have to master different things that a calculator could do, there's certain tasks that will become unnecessary for us to focus on, and that those that are deeply human are the ones that I would emphasize if I was advising somebody at the beginning of their career right now.

Participant: But why couldn't AI eventually do that? Maybe even do it better? Eventually.

Adam Bly, System: Eventually, yeah. Any of these conversations are about some period of time at a time. Who knows, we're 25 years from now, I have no idea. So, we're really talking, what do you do for the next 10 years? What do you do for the next 20 years? And so, for the next 10 years, that seems unlikely, I wouldn't make that bet. I would not make that bet, literally.

In 30 years, 40 years from now, maybe, but so if you're making a decision today on what, in response to the question, what would you train in today that can manifest in the next decade, these seem like rational bets to me. If you're asking 50 years out, I have no idea.

Ivy Cohen: So I'm wondering, Esther, if you could particularly chime in on this next thought, that the topic is investing in AI, and then everybody else. We have people who actually -- most sitting at this panel have investors, and have invested their sweat and lives in developing AI for solutions.

Esther, what are your thoughts about what types of AI investments will have the biggest gains in the short term, in the next few years, and perhaps shed some light on your strategy for choosing the investments that you're involved with.

Esther Dyson, Wellville: The short term, if you invest in AI, you're going to make a lot of money, but you better sell out pretty fast, basically.

It's a world of hype, and some of these, it's sort of like, is your company get acquired? Great. If not, I don't think the current enthusiasm will last, and I think there's going to be a lot of duplication. On the one hand, you have the large language models, which are really expensive to build and operate, and then you have companies like System and Verneek, and quite a few others, that are doing something focused and specific using all the capacity that's out there. I think those are going to be the winners, but they need... then, honestly, what I look for is a good management team. I look for somebody who knows exactly what they're doing.

More companies fail because the team just doesn't deliver somehow, because, you can fix the technology, it's much harder to fix the team.

As an angel investor, I just go for companies where I think I'll learn something, and where they're doing something useful and interesting, but I would not try to compete with Google and OpenAI and the billion dollar valuations that a few of these startups are getting, I'd focus on a particular task where the people involved actually know something about the task. It's like, when you ask about what do you need to know to create ChatGPT, or applications, you need to know something specific, in addition to the sort of general programming tech.

I like System because the world of medicine and health care, it's really complicated, and there's a lot of value in providing validated knowledge to this large ecosystem of health care, that needs reliable, trustworthy information, and they care about it because it's people's lives.

So, I'd look for somebody with a real focus doing something useful.

At the other end, you're going to have dozens and dozens of so called assistants, and it's just really hard to figure out which ones will succeed, but I'd go for good management over something shiny.

Ivy Cohen: Great. I'm going to ask one more question of the panel, and then we'll open it up for questions from the audience. Core to Disruptive Technologists' mission is access across all communities to technology, how do you see, for communities that are underrepresented in technology, particularly minority communities and lower income communities across America, with a very America-centric spin on this question, how do you see generative AI and ChatGPT and AI, how do you see underrepresented and disadvantaged communities experiencing this, and what are the potential impacts and the opportunities for access?

Nasrin Mostafazadeh, Verneek: I'll comment on that. To me, the most fascinating outcome of this, if you will, breakthrough moment in AI, which again wasn't overnight, but in the past handful of years, five, six years, has been very much the fact that it has democratized the fruits of these technologies for the masses.

The fact that, for example, in our world, Quin is this AI you can talk with throughout your shopping journey. You can ask, what is the healthiest peanut butter I can buy for my kids, that costs under $4, because that's your budget as a mom of, whatever, four, living somewhere in New York City, and you can ask that in any language. There's so many people that cannot really, like, they are maybe visiting their relatives in the U. S. or, for whatever reason, they need assistive technologies, they can now make their most basic needs overcome, which is to eat, literally eat, and make healthy decisions for your livelihood, day over day, these are things that we couldn't do, like, years and years ago.

When, back in grad school, when I started my PhD in 2012, that's when things were just getting started with deep learning, getting introduced to natural language processing, and we did not have as many multilingual systems that could understand language in any, basically, language. So, these are definitely things that are key in my opinion, in terms of the equilibrium that this has created, in terms of the nature of the technology helping anyone and everyone, and that's the beauty of it.

Ivy Cohen: Opportunity for it to become an equalizer. Yes.

Adam Bly, System: Again, to make the data point, the power of these models, and applications built on top of them, lies in, first and foremost, the data that these models are trained on, and then what it can infer. This is an extraordinarily critical moment to recognize the bias that exists in that training data, that is what is on the Internet, is what these models are training on. Even if we're training on high quality scientific literature, we know that the history of science is itself biased in terms of the populations that research is conducted on. If we're endeavoring to improve equity across society as a fundamental principle that we want technology to support, this is an extraordinarily important moment for government, for foundations, for universities, who are associated with historically underrepresented populations, to ensure that the training data that these models get trained on, over the coming decade, have greater representation in all of the various issues, health, social issues, civic justice, so on and so forth, that today would result in deepening the biases in society by virtue of the proliferation of these AIs.

And so, it's a critical moment to be funding and supporting efforts to mitigate the foundational bias in the training data.

Ivy Cohen: And that really starts with our education system, I think. If we are training school children, and teaching at the university level, to make sure that people understand that their own worldview is not the composite of data, but that they have to be sure to be getting data from a representative sample of the population and information.

Adam Bly, System: I would say even, like very practically right now, if I was a foundation who had any concern for any issue, whatsoever, affecting an

underrepresented population, a minority population, absolutely find ways of funding the development of balancing training data. That might be research that's missing, that might be explicitly training data, that might be exposing the biases.

There's so many great organizations, AI organizations, that are doing this and exposing these biases. There's great work on the transparency front now to expose bias, so many great people doing this work, but now we need the funding to mitigate that bias, so that the next applications, that get trained on the next corpus of data, actually mitigate and improve equity in society.

Ivy Cohen: Absolutely.

Do you want to say something quick?

Rushil Vora, Microsoft: Just a quick comment. Given that AI now has this larger mainstream platform, actually capitalizing on that to challenge some of these pieces that we do see. The more examples we see of these biases, the more examples we see of these foundational models behaving in a way in which we wouldn't necessarily anticipate them to, not representing groups that aren't represented, we should use this chance, and use this moment and time, to actually challenge those pieces, and use the platform that it currently has, to actually serve as a vehicle to spread that. Definitely, I think this is a great time, more so than any other, to actually push that narrative as well.

Ivy Cohen: Absolutely. Esther, did you want to comment before we go to audience questions?

Esther Dyson, Wellville: Yeah, just very briefly.

Part of the problem is, we need to not look at the way the numbers are, but look at what caused them to be that way, which AI can automatically ask that question, I think, much better than we can, if we would let it do so.

Rather than simply predict this kid is going to end up probably in jail, how can we keep the kids out of jail? How can we remedy this situation rather than simply spread it?

Part of the value is we can now do counterfactuals better, we can look not just at the results of taking action, but we can see what the lack of taking action has led to, and try and fix it.

Ivy Cohen: Absolutely,

Esther Dyson, Wellville: That's all. Thank you.

Ivy Cohen: Thank you. Audience show of hands. Anybody have a question you'd like to ask. Please. Okay, right over there.

Participant: Yeah, thanks everybody for tonight. I just was curious about favorite prompts from the panel, whether it's just streamlining your habits, or enhancing your hobbies, or you mentioned creating a list of clients, Adam, for your business, or for Esther, for your own ventures. I'd love to hear what you guys are using ChatGPT for, that we could apply to ourselves.

Ivy Cohen: Thank you. Esther?

Esther Dyson, Wellville: I have one favorite one. I mean, there's so many different things you can do, but there was this Wall Street Journal story about surge pricing, and how this poor rich guy had to pay $400 to get a bowling lane, like Friday evening or something, and I asked ChatGPT to rewrite it from the point of view of a guy looking for a bargain, and it was just wonderful. Basically, whenever you read something that seems to have a point of view, ask it to write it from the other point of view, and then you can understand both sides of the argument. It's very illuminating, and I wish more people would do that about things that they feel strongly about.

That's just one random one, but it's cool.

Ivy Cohen: Okay, we're going to move to the next question. Thank you, please.

Participant: Hello. Thank you for your insights. A lot of questions were popping up in my head, but the one that I would ask this group is all of you have to, in some degree, sell the work that you do. It's very emergent, obviously, so a lot of people don't understand, or you're having to pitch something that people may want to invest in. I'm curious, as you think about this conversation, especially as we're trying to overcome, maybe, deep mistrust with technology, or people's lack of exposure to the technology, maybe from each of you, how you think about talking about the benefits of AI, without getting into the potential, like, doom spiral around all the ways that it could take over the world.

Nasrin Mostafazadeh, Verneek: Well, it's a great question, by the way, and it's so funny, even right now, in this few minutes that we spent together, you see, I'm all about the goods, I've spent my lifetime, but like applying myself towards the goods, to your point, you can't really avoid the conversation spiraling into the bads and the ugly and all of that.

The truth is the problem we have, as human beings, is that we are dopamine junkies, and the good does not create as much virality as much clicks, as much attention, as the bads, that's unfortunate reality about all of us in whatever capacity we are operating, including enterprises that we, for example, are selling our technologies to. What we do

at Verneek is actually -- I think that launch of ChatGPT, we were installed for two and a half years, we launched out of install a couple of months ago, a few months after ChatGPT had come out, and I think it actually has helped raising the awareness for the whole field.

Like, we would go on enterprise conversations, and explain that this is an AI, it answers questions about health, about nutrition, about product assortment, about recipes, about all of these that apply in this particular consumer journey, and they'll be like, What does it mean? How can it do it all? Like, are you a recipe company? Are you a product assortment company? Are you this and that? And the fact that domain generated intelligence is something that exists and you can, as anyone, can interact with it, through a language interface, was not known. So, I think that's been definitely very helpful.

Just rest assured, actually, none of the conversations that we are having with our enterprise partners are about all these doomsday things, because it really doesn't apply.

But, media is in love with doomsday stories, you have no idea how many reporters I've had conversations with that, they're like, Oh my God, we want to write about you, but can you tell me how the headline could be as sexy as Hollywood is getting wiped out with ChatGPT? No, there is no way. Retail, I call it the trifecta of, basically win - win. What we're doing is literally a win for consumers, for retailers, for big brands. There's no way you can spin that story to be as sexy as Hollywood is dying because of ChatGPT.

So,yeah, I think we need more of these conversations, we need more people to talk about the ways to go about building these technologies, that are controllable, so that we'd see the fruits of it and not the ugly side.

Ivy Cohen: Adam?

Adam Bly, System: Two quick things. For us, we explain and focus on how our approach to using large language models is constrained by our use of structured data that we extract from the scientific literature, meaning that everything that System generates, all the answers that we're producing, are much more transparently cited, and explainable and reliable than a ChatGPT.

When an answer that System's Pro or search engine generates can cite 36, 40, 80 studies instead of none, instead of hallucinating, that becomes incredibly important to build trust, especially in areas where high stakes decisions are being made like health care.

The other thing that is really important to us is that we're incorporated as a public benefit corporation, which is a legal structure, relatively new, but with enough

jurisprudence around it that it's legitimate, and it allows for a company to encode certain societal responsibilities in the charter of the company, and it ensures that directors of those companies have just as much fiduciary obligation as they do responsibility to that charter. In our charter, for example, we've codified certain principles that preclude us from advertising type business models in the future, and other things like that.

That's really important to me as a founder, at a time where there is so much risk associated with these technologies. It's important to my team, and it's why we're assembled around our mission. But, it's also really important to our investors and to our customers, that they understand that it's virtually impossible to change that charter as we take on additional capital and are more exposed to larger capital markets, and the changes that companies go through as they grow.

So, the PBC is a really compelling model to encode some of these values from the beginning of the DNA of the company.

Ivy Cohen: Great, thank you. Next question, and we have got to go very quickly, so please.

Participant: My question is, I recently read an article that kind of changed my perspective on AI. It's an article published in the New York magazine called Inside the AI Factory, and it explains how the large language models are actually made, and they are made by millions of people, actually, working in secret, signing NDAs. They're not even able to share what they're doing with their colleagues. it's kind of crazy, because if you look at the size of it, it's a whole economy. So, I just wanted to know, are you aware about the way that AI is actually produced, the large language model? And, is there something we can also do about it, because it's about the hype, it's not as automated as it seems. I just wanted to have your reaction on that.

Nasrin Mostafazadeh, Verneek: Yeah, I'll take that. I've spent my lifetime on collecting data for training models. Literally, that's been the engine that I've been running for the past many, many years. Do you see the reason that article has resonated with you, that it was about the fear, about the unknown, about the secrecy of bunch of people that have gotten together to build this that are under NDAs and all? AI historically, a machine learning side of things, a statistical language processing, et cetera, has been fueled by collecting data that is labeled, that tells you when X comes in, what is the Y that should go out, out of a function that you're basically building, so that's inherently has always been part of how we build AI, and will always be to a good degree how you build AI. The article you're referring to, of course, talks about the fact that ChatGPT was fueled by these, basically, reinforcement learning paradigms that need direct targeted output as how it should behave, which again, very normal, all things that should and do get done, but they're not in terms of the labor, like efficacy and justice and all of that, because they're hiring people that they paid like cents per, over dollar to, that's a different part

of the equation, but that's how our models get trained. You collect data, no problem with that.

Ivy Cohen: We're going to have to continue with this discussion in the room, outside the room, virtually, remotely, every way we can. Thank you everyone for participating today, wonderful to have you. Thank you, our wonderful panelists, our host, Microsoft, and Lauren.